

**WASHINGTON DEPARTMENT OF ECOLOGY**  
**ENVIRONMENTAL ASSESSMENT PROGRAM**  
**FRESHWATER MONITORING UNIT**  
**STREAM DISCHARGE TECHNICAL NOTES**

**STATION ID:** 29A070  
**STATION NAME:** Rock Creek at stevenson  
**WATER YEAR:** 2012  
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**Introduction**

Watershed Description

Operation of station started on June 18, 2008. Stage was recorded on a Design Analysis® data logger every fifteen minutes. Staff gage (primary) and laser level (secondary) readings were made routinely for the duration of the period of record.

Gage Location

Ecology's telemetry stream gage on Rock Creek is located at river mile 1.0, upriver from the town of Stevenson on Allen Road. Gage is located on the upstream side of bridge.

Table 1.

Drainage Area (square miles)	42
Latitude (degrees, minutes, seconds)	45 41 55
Longitude (degrees, minutes, seconds)	121 54 18

## Discharge

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	245
Median Annual Discharge (cfs)	122
Maximum Daily Mean Discharge (cfs)	1,570
Minimum Daily Mean Discharge (cfs)	6
Maximum Instantaneous Discharge (cfs)	1,770
Minimum Instantaneous Discharge (cfs)	6
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	748
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	8
Number of Days Discharge is Greater Than Range of Ratings	16
Number of Days Discharge is Less Than Range of Ratings	0

Note: Statistics displayed in Table 2 may not include values in which the predicted discharge exceeds the range of ratings.

## Narrative

The highest reported daily flow occurred on January 25. The lowest daily flow occurred September 14.

## Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	2
Weighted Rating Error (% of discharge)	17
Total Potential Error (% of discharge)	19

## Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	2	101	
Period of Ratings	08-04-09 to 03-24-12	07-31-12 to 04-10-13	
Range of Ratings (cfs)	8 to 925	7 to 639	
No. of Defining Measurements	22	14	
Rating Error (%)	17.3	16.4	

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

### **Narrative**

Channel filling occurred over the spring and summer months resulting in a shift in the rating.

### **Stage Record**

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	6.35
Maximum Recorded Stage (feet)	15.43
Range of Recorded Stage (feet)	9.08
Number of Un-Reported Days	14
Number of Days Qualified as Estimates	8
Number of Days Qualified as Unreliable Estimates	0

### **Narrative**

There were 319 days of stable drift, meaning little uncertainty was introduced to the discharge record from errors in the stage record.

## Modeled Discharge

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	None
Range of Modeled Stage (feet)	
Range of Modeled Discharge (cfs)	
Valid Period for Model	
Model Confidence	

## Surveys

Table 7. Survey Type and Date (station, cross section, longitudinal)

Type	Date

## Activities Completed

None
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